The Seesaw

Friday, 29 January, 2021 21:39

A seesaw consisting of a uniform board of mass M and length , supports at rest a father and daughter with masses m_f and m_d, respectively, as shown. The support (called the fulcrum) is under the center of mass of the board, the father is a distance d from the center, and the daughter is a distance $l/2$ from the center.

- Determine the magnitude of the upward force $\vec{n}$ exerted by the support on the board.
- Determine where the father should sit to balance the system at rest.